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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/592,987	09/15/2006	Heinz W. Lorig	SHEE 2 00067	7696

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RANKIN, HILL & CLARK LLP
23755 LORAIN ROAD, SUITE 200
NORTH OLMSTED, OH 44070

EXAMINER

LAM, HUNG Q

ART UNIT	PAPER NUMBER
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2883

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08/09/2010

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/592,987	Applicant(s) LORIG ET AL.	
	Examiner HUNG LAM	Art Unit 2883	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 03 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 18 May 2010.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☒ Claim(s) 1 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

Response to Argument

1. Applicant's arguments with respect to claims 1-20 have been considered but are moot in view of the new ground(s) of rejection. A new reference and a new ground of rejection are introduced as necessitated by amendments to above claims accordingly.

DETAILED ACTION

Status of the Application

New claim 20 has been added.

Claims 1-20 are pending in this application.

Claim Rejections - 35 USC § 112

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter, which the applicant regards as his invention.

2. Claim 1 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. For instance, the claim's language is considered to be vague and indefinite because it is unclear to the reader what structure is being considered as the sleeve, since the claim is directed to the "sleeve" only. Thus the flange rings and other structure of the printing cylinder are not positively recited.

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Claim Objections

Claim 1 is objected to because of the following informalities: The claim seems to be lacking transitional language such as "comprising" between the preamble and the body of the claim. Appropriate correction is required.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

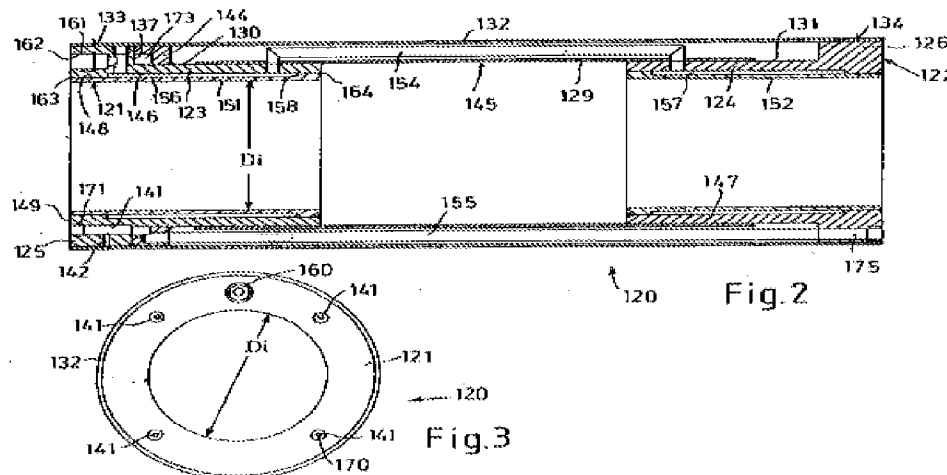
This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

Claims 1-11 and 14-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over **Lorig et al.** (US. Pub. 2004/0079250) in view of **Rossini** (US. Pat. 5,819,657) and **Dzierzynski et al.** (US. Pat. 7,011,021) and still further in view of **Kolbe et al.** (US. Pub. 2005/0132910)

Regarding claims 1 and 19, **Lorig et al.** disclose a sleeve for mounting on carrier cylinders of printing machines with two flange rings (121, 122) at the ends, on which a cylindrical outer sleeve (132) wall and an inner sleeve (129) wall are supported at a distance from each other, wherein the outer sleeve wall comprises a fiber composite material with at least one layer of a carbon fiber-nonwoven sheet (i.e. fiber reinforced sleeve/tube) ("abstract", Fig. 3).

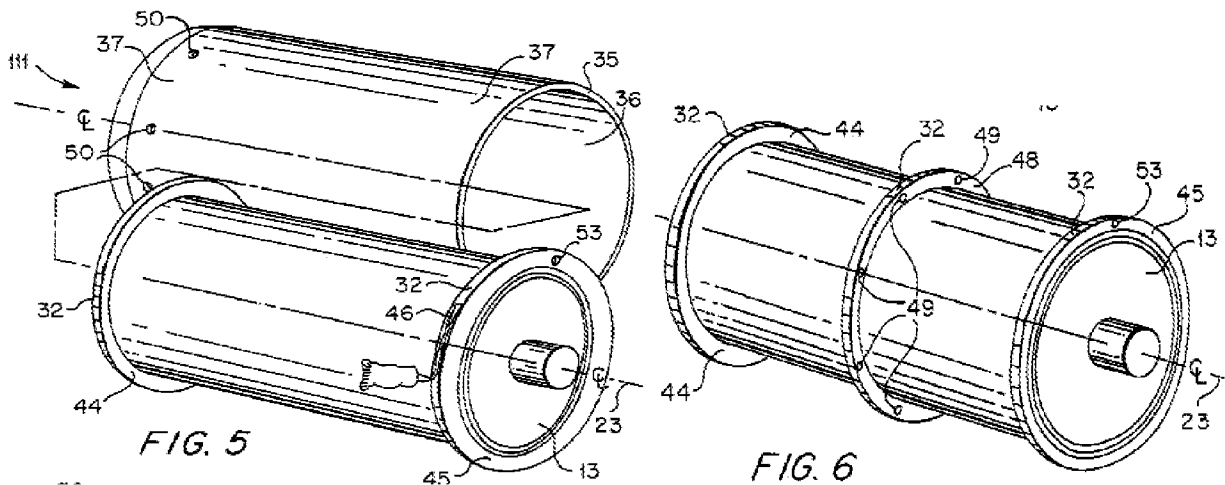


Reproduced from US. Pub. 2004/0079250.

Lorig et al. do not expressly disclose that between the two flanges rings at least one support ring is arranged which supports the outer sleeve wall vis-à-vis the inner sleeve wall.

Rossini teaches an air carrier for a printing cylinder with two flanges (44, 45), wherein between the two flange rings at least one support ring (i.e. ring spacer 48) arranged between an outer sleeve 35 wall and an inner sleeve (40) wall to support the outer sleeve wall vis-à-vis the inner sleeve wall (Fig. 5 - Fig. 7).

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Reproduced from US. Pat. 5,819,657.

It would have been obvious to the one having ordinary skill in the art at the time the invention was made to use the teachings of **Rossini** in the device of **Lorig et al.** as to provide at least one support ring is arranged which supports the outer sleeve wall (20) vis-à-vis the inner sleeve wall. The motivation for doing so would be to provide additional structural integrity or support to the outer sleeve and the inner sleeve and also enhanced/reinforced the structure of the printing cylinder.

Lorig et al. further only teach one layer instead of several layers of a carbon fibres-nonwoven sheet as claimed.

Dzierzynski et al. teach a printing blanket sleeve (110) comprising several layers of a carbon fibres-nonwoven sheet (108) (Fig. 1).

It would have been obvious to the one having ordinary skill in the art at the time the invention was made to use the teachings of **Dzierzynski et al.** in modifying the device of **Lorig et al.** modified by **Rossini** as to provide more than one layer of a carbon fibres-nonwoven sheet.

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The motivation for doing so would be to provide additional layer to the outer sleeve for enhancing/reinforcing the structure of the outer sleeve.

Lorig et al. further do not expressly disclose that the fibers of at least some of the several layers have the same fiber orientation relative to each other, and a winding of carbon fibers surrounding the layers of carbon fibers-nonwoven sheets.

Kolbe et al. teach a printing cylinder comprising a sleeve (12) made of carbon fiber composite material, wherein the sleeve comprise a first layer (i.e. outer layer) of carbon fibers-nonwoven sheet/layer (20) in which fibers are oriented in axial direction; and a second layer (18) of winding carbon fibers surrounding an inner surface of the first layer of carbon fibers-nonwoven sheet/layer (Fig. 1).

It would have been obvious to the one having ordinary skill in the art at the time the invention was made to use the teachings of **Kolbe et al.** in modifying the device of **Lorig et al.** modified by **Rossini** and **Dzierzynski et al.** by selecting the same orientation of fibers among the layers of carbon fibers-nonwoven sheets, and also providing a layer of winding of carbon fibers surrounding the layers of carbon fibers-nonwoven sheets. The motivation for doing so would be to select a common orientation of fibers among the layers of carbon fibers-nonwoven sheets for simplifying the fabrication process, and also enhancing/reinforcing the structure of the outer sleeve by providing an additional layer of winding fibers to the outer sleeve.

Regarding claim 2, in accordance with the rejection of claim 1, **Lorig et al.** modified by **Rossini** in view of **Dzierzynski et al.** and **Kolbe et al.** further disclose the claimed inventions except for the at least one support ring comprises several support rings located between the two flange rings. However, it would have been obvious to one having ordinary skill in the art would

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add additional support rings between the two flange rings, such that modification would provide more support to the outer sleeve and inner sleeve. *In re Harza*, 274 F.2d 669, 124 USPQ 378 (CCPA 1960).

Regarding claims 3 and 5, Lorig et al. modified by **Rossini** in view of **Dzierzynski et al.** and **Kolbe et al.** further disclose the claimed inventions except for the arrangement/orientation of each of said several of the carbon fiber-nonwoven sheet(s) is 90° or 45° relative to a sleeve axis. It would have been obvious to one having ordinary skill in the art at the time the invention was made would have been motivated to arrange the carbon fiber-nonwoven sheet(s) in these possible claimed angled relative to the sleeve axis, such that modification would achieve a certain desire rigidly in reinforces the sleeve structure.

Regarding claims 4 and 6, Lorig et al. modified by **Rossini** in view of **Dzierzynski et al.** and **Kolbe et al.** further disclose the claimed inventions **except** for eight to fifteen layers of carbon fiber sheets, wherein each of the several layer of carbon fiber-nonwoven sheet of said outer sleeve wall are defined with a same unidirectional carbon fiber-nonwoven sheets. Since applicant has not pointed to any criticality of such that range, it would have been obvious to the one having ordinary skill in the art at the time the invention was made would include as that many of claimed layers of carbon fiber sheets, wherein one these layers would comprise several layers of unidirectional carbon fiber-nonwoven sheets, since it has been held that where the general condition of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art. *In re Aller*, 105 USPQ 233. The motivation for doing so is just a matter design of choices of reinforced the sleeve. This rejection may be overcome by a showing or unexpected results associated with such a range.

Regarding claims 7-9, Lorig et al. modified by **Rossini** in view of **Dzierzynski et al.** and **Kolbe et al.** further disclose the claimed inventions **except** for the carbon fiber-nonwoven sheets comprises a carrier fiber and a textile material or a glass fiber; wherein carbon fiber-nonwoven sheets comprises both carbon fiber and glass fiber such that said outer sleeve wall comprises a carbon fiber - glass fiber hybrid and preferably comprises fiber-nonwoven sheets with carbon fibers and glass fibers. Since applicant has not pointed to any criticality of such that type material, it would have been obvious to the one having ordinary skill in the art at the time the invention was made would select these claimed material mentioned above, since it has been to be within the general skill of a worker in the art to select a known material on the basis of its suitability for the intended use as a matter of obvious design choice. *In re Leshin*, 125 USPQ 416. The motivation for doing so is just a design choice of selecting common materials in the art for the outer sleeve fabrication. This rejection may be overcome by a showing or unexpected results associated with such that type of material.

Regarding claim 10, Lorig et al. modified by **Rossini** in view of **Dzierzynski et al.** and **Kolbe et al.** further disclose the claimed inventions **except** for the carbon fibers in the carbon fiber sheet are arranged in bundles and the bundles are arranged relative to each other by way of the carrier fiber; wherein a winding with carbon fibers surrounding the carbon fiber sheet(s). It would have been obvious matter of design of choice to have the carbon fibers in the carbon fiber sheet arranged as claimed above, and also have the carbon fiber sheet wrapped with carbon fibers, since the applicant has not disclosed that claimed configurations solves any stated problem or is for any particular purpose and/or it appears that the invention would perform equally well with that claimed configurations/arrangements.

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Regarding claims 11 and 20, Rossini further discloses that the carbon fiber sheet is embedded in a matrix comprising an ester, wherein said ester comprises vinyl ester (col. 7 lines 1-11).

Regarding claims 14 and 15, Lorig et al. modified by **Rossini** in view of **Dzierzynski et al.** and **Kolbe et al.** further disclose the claimed inventions except for the two flange rings each include an outer/inner surface/wall area on which the outer/inner sleeve wall is supported; and an end-site outer/inner flange collar which annularly projects beyond an external/inner surface/wall area of each of the flange ring, on which the outer sleeve wall is supported, and that delimits an end of the outer/inner sleeve wall.

It would have been obvious matter of design of choice to have the two flange rings to have that figure (the inner and outer flange collars) as claimed above, since the applicant has not disclosed that claimed configurations solves any stated problem or is for any particular purpose and/or it appears that the invention would perform equally well with that claimed configurations/arrangements, since this is a common design in the art that would maintain the position between the wall of the outer sleeve and the inner sleeve.

Regarding claims 16 and 17, Rossini further discloses at least one of the flange rings (44, 45) comprises a boring system (52/56) to act in conjunction with a compressed air system of the carrier cylinder, whereby preferably the boring system in the flange ring (12) has at least one radial boring (50) with an opening on the sleeve outer wall; wherein the axial boring (52/56) of the boring system in the flange ring (44, 45) is connected with the supply channel (49) in the support ring (48) via pipeline (56) (Fig. 1- Fig. 4).

Regarding claim 18, Lorig et al. further disclose the boring system with a pipe line 154 includes a single feeder (i.e. not shown the label or the right angled pipe to the pipe 154) to the inner sleeve wall (129) and wherein the inner sleeve wall is provided with a circumferential groove (156/157) on an inner side, into which the single feeder opens (Fig. 2).

Claims 12 and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over **Lorig et al.** (US. Pub. 2004/0079250) in view of **Rossini** and **Dzierzynski et al.** (US. Pat. 7,011,021) and still further in view of **Kolbe et al.** (US. Pub. 2005/0132910) and **Lorig et al.** (US. Pub. 2003/0177925).

Regarding claims 12 and 13, Lorig et al. modified by **Rossini** in view of **Dzierzynski et al.** and **Kolbe et al.** further disclose the claimed inventions except for at least one discharge element for discharging electrostatic charges is arranged in one of the flange rings.

Rossini teach a sleeve body (2) for flexographic printing, which comprise a vacuum-coated metal coating layer (5) with surface (6), and an electroconductive element (20) provided at one end of the sleeve body (2) for diverting electrostatic charges into the outer wall of the roll of the king roll. The sleeve is therefore given an electroconductive structure, through which the unavoidable electrostatic charges in printing presses with a plurality of printing couples are diverted via the king roll before it reaches a scale that would suffice for a discharge (“abstract”, Fig. 1-Fig. 3).

Therefore, it would have been obvious to one having ordinary skill in the art to use the teachings of **Lorig et al.** to modify the sleeve of **Lorig et al.** modified by **Rossini** in view of **Dzierzynski et al.** and **Kolbe et al.** by providing at least one discharge element for discharging electrostatic charges is arranged in one of the flange rings at one end of the sleeve. One would

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have been motivated to make this modification of including/having that claimed element for a better controlling of the electrostatic and preventing ignition or deflagration of the solvents used in the printing ("abstract").

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hung Lam whose telephone number is 571-272-9790. The examiner can normally be reached on M - F 07:30 AM - 05:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mark Robinson can be reached on 571-272-2319. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Hung Lam/ Patent Examiner, Art Unit 2883	/CHARLIE PENG/ Primary Examiner, Art Unit 2883
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